

## PENT COOPERATION TREA

From the INTERNATIONAL BUREAU

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

Date of mailing (day/month/year)

16 June 2000 (16.06.00)

To:  
 Assistant Commissioner for Patents  
 United States Patent and Trademark  
 Office  
 Box PCT  
 Washington, D.C.20231  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

International application No.

PCT/US99/24941

Applicant's or agent's file reference

7322M/JB

International filing date (day/month/year)

22 October 1999 (22.10.99)

Priority date (day/month/year)

02 November 1998 (02.11.98)

## Applicant

CAUWBERGHS, Serge, Gabriel, Pierre, Roger et al

1. The designated Office is hereby notified of its election made:

 in the demand filed with the International Preliminary Examining Authority on:

18 May 2000 (18.05.00)

 in a notice effecting later election filed with the International Bureau on:

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2. The election  was was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
 34, chemin des Colombettes  
 1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

S. Mafla

Telephone No.: (41-22) 338.83.38

# INTERNATIONAL SEARCH REPORT

International Application No

US 99/24941

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 C11D3/37 C11D3/36

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 C11D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 95 06098 A (CUSONS INT LTD ; HALLIWELL DUNCAN COOPER (GB); ASPIN PAUL (GB); HA) 2 March 1995 (1995-03-02) • page 2, paragraph 2; claims; examples ---	1, 2
X	US 4 126 563 A (BARKER GRAHAM) 21 November 1978 (1978-11-21) examples XVI, XVII, XXVI • ---	1, 2, 4
X	DE 22 32 353 A (PROCTER & GAMBLE EUROP) 18 January 1973 (1973-01-18) claims 1,7; examples • -----	4

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance  
 "E" earlier document but published on or after the international filing date  
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
 "O" document referring to an oral disclosure, use, exhibition or other means  
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  
 "&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
8 February 2000	29/02/2000

Name and mailing address of the ISA  
 European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Loiselet-Taisne, S

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

US 99/24941

Patent document cited in search report	Publication date	Patent family member(s)			Publication date
WO 9506098	A 02-03-1995	AU CN GB PL	7504894 A 1133058 A 2296016 A 304790 A		21-03-1995 09-10-1996 19-06-1996 06-03-1995
US 4126563	A 21-11-1978	US	4126561 A		21-11-1978
DE 2232353	A 18-01-1973	AT BE CA CH ES FR GB IT LU NL	565772 A 785653 A 994635 A 579142 A 404270 A 2144721 A 1348212 A 962354 B 63458 A 7209130 A		15-01-1977 02-01-1973 10-08-1976 31-08-1976 16-06-1975 16-02-1973 13-03-1974 20-12-1973 23-01-1973 04-01-1973

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

## (PCT Article 36 and Rule 70)

Applicant's or agent's file reference 7322M/JB	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US99/24941	International filing date (day/month/year) 22/10/1999	Priority date (day/month/year) 02/11/1998
International Patent Classification (IPC) or national classification and IPC C11D3/37		
Applicant THE PROCTER & GAMBLE COMPANY et al.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 5 sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input checked="" type="checkbox"/> Certain defects in the international application</li> <li>VIII <input checked="" type="checkbox"/> Certain observations on the international application</li> </ul>		

Date of submission of the demand 18/05/2000	Date of completion of this report 12.10.2000
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Ekholm, M Telephone No. +49 89 2399 8210



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US99/24941

**I. Basis of the report**

1. This report has been drawn on the basis of (substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.):

**Description, pages:**

1-42 as originally filed

**Claims, No.:**

1-10 with telefax of 20/09/2000

2. The amendments have resulted in the cancellation of:

the description, pages:  
 the claims, Nos.:  
 the drawings, sheets:

3.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims 1-10 YES
	No:	Claims
Inventive step (IS)	Yes:	Claims
	No:	Claims 1-10 NO
Industrial applicability (IA)	Yes:	Claims 1-10 YES
	No:	Claims

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US99/24941

2. Citations and explanations

**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**V. Reasoned statement under Rule 66(2)(a)(ii) PCT (N,IS,IA)**

5.1 Reference is made to the following document:

D1: WO 95 06098 A

**5.2 Novelty (Article 33(2) PCT)**

5.2.1 The application is novel since no prior art has been found that describes the subject-matter of the claims and thus no objections regarding novelty will be raised under Article 33(2) PCT.

**5.3 Inventive step (Article 33(3) PCT)**

5.3.1 The problem the Applicant wishes to solve is to prepare a fabric detergent composition which reduces the damage of the fabric due to fabric abrasion. Another problem that is desired to solve is to reduce the dye transfer between colored fabrics.

5.3.2 The proposed solution is to use certain higher molecular weight polymers which comprise an amide unit, an N-oxide unit or mixtures thereof.

5.3.3 In the application there are several compositions given that lie within the scope of the claims, however there is not one single test that shows that the composition actually reduces fabric abrasion. There is no evidence given that lets the Examining Authority believe that fabric abrasion caused by washing can be reduced by the addition of specific high molecular weight polymers.

The second problem solved is the dye transfer inhibiting effect. Even this effect has not been proven in the application, but by reading document D1 it is clear that the effect does exist (see D1 Example 1 pages 4-7).

The only effect that is certain to exist is the dye transfer inhibiting effect of the high molecular weight polymer. Since this effect is already known by the man skilled in the art the subject-matter of claims 1-10 does not involve an inventive step.

If the applicant manages to prove that reduced fabric abrasion can be achieved using the compositions disclosed and that the effect comes from the high molecular weight polymer, then the subject-matter of the claims may comprise an inventive step.

**VII. Certain defects in the international application (form or content)**

7.1 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.

**VIII. Certain observations on the international application (clarity)**

8.1 Although claims 1, 7, and 8 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and/or in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

Hence, claims 1, 7, and 8 do not meet the requirements of Article 6 PCT.

8.2 Claims 8 and 9 are not supported by the description since the subject-matter of the claims can not be found therein (Article 6 PCT).

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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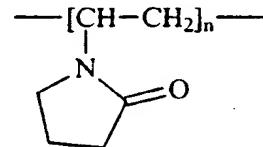
International application No. PCT/US99/24941

8.3 In order to facilitate the examination of the conformity of the amended application with the requirements of Article 34(2)(b) PCT, the Applicant is requested to clearly identify the amendments carried out, no matter whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based (see also Rule 66.8(a) PCT).

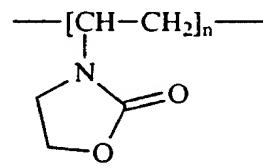
If the Applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

**WHAT IS CLAIMED IS:**

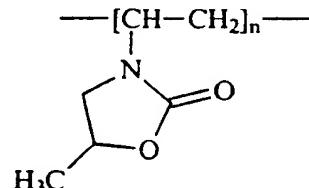
1. A fabric care composition comprising:
  - a) from 0.01% to 20% by weight, of a fabric abrasion reducing polymer, said fabric abrasion polymer comprising:
    - i) at least one monomeric unit comprising an amide moiety;
    - ii) at least one monomeric unit comprising an N-oxide moiety;
    - iii) and mixtures thereof; and
  - b) the balance carriers and adjunct ingredients;provided the molecular weight of said fabric abrasion reducing polymer is greater than 100,000 daltons.
2. A composition according to Claim 1 wherein said fabric abrasion polymer comprises one or more monomeric units selected from the group consisting of:
  - a) a polyvinylpyrrolidone having the formula:



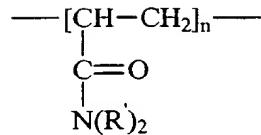
- b) a polyvinyloxazolidone having the formula:



- c) a polyvinylimethyloxazolidone having the formula:

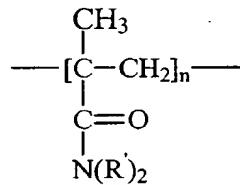


- d) polyacrylamides and N-substituted polyacrylamides having the formula:



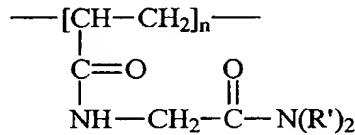
wherein each R' is independently hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, or both R' units can be taken together to form a ring comprising 4-6 carbon atoms;

e) polymethacrylamides and N-substituted polymethacrylamides having the general formula:



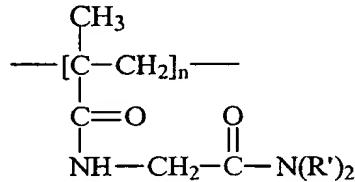
wherein each R' is independently hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, or both R' units can be taken together to form a ring comprising 4-6 carbon atoms;

f) poly(N-acrylylglycinamide) having the formula:



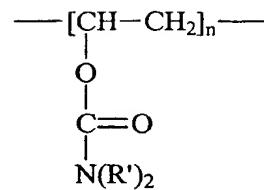
wherein each R' is independently hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, or both R' units can be taken together to form a ring comprising 4-6 carbon atoms;

g) poly(N-methacrylylglycinamide) having the formula:



wherein each R' is independently hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, or both R' units can be taken together to form a ring comprising 4-6 carbon atoms;

h) polyvinylurethanes having the formula:



wherein each R' is independently hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, or both R' units can be taken together to form a ring comprising 4-6 carbon atoms

- i) and mixtures thereof.

3. A composition according to either of Claims 1 or 2 wherein said fabric abrasion polymer is also a dye transfer inhibiting moiety comprising one or more poly(2-ethyl-2-oxazoline) monomeric units having the formula:

$$\begin{array}{c}
 \text{---} [\text{CH}_2\text{---CH}_2\text{---N}]_n \text{---} \\
 | \\
 \text{C=O} \\
 | \\
 \text{CH}_2\text{CH}_3
 \end{array}$$

wherein the index n provides a molecular weight greater than 100,000 daltons.

4. A composition according to any of Claims 1-3 wherein said fabric abrasion polymer is a polyvinylpyrrolidone having a molecular weight of from 40,000 daltons to 360,000 daltons.

5. A composition according to any of Claims 1-4 further comprising from 0.001% to 50% by weight, of a dye fixing agent.

6. A composition according to any of Claims 1-5 further comprising from 0.01% to 50% by weight of a bleach protection polyamine selected from the group consisting of 1,4-Bis-(3-aminopropyl)piperazine, 1,1-N-dimethyl-5-N'-methyl-9,9-N''-dimethyl dipropylenetriamine, 1,1-N-dimethyl-9,9-N''-dimethyl dipropylenetriamine, N,N'-bis(3-aminopropyl)-1,3-propylenediamine, and mixtures thereof.

7. A composition which provides reduced fabric abrasion, said composition comprises:

- a) from 0.01% by weight, of a fabric abrasion reducing polymer, said fabric abrasion polymer comprising:

- i) at least one monomeric unit comprising an amide moiety;
  - ii) at least one monomeric unit comprising an N-oxide moiety;
  - iii) and mixtures thereof;
- b) optionally from 1% by weight, of a fabric softening active;
- c) optionally less than 15% by weight, of a principal solvent, said principal solvent has a ClogP of from 0.15 to 1;
- d) optionally from 0.001% to 90% by weight, of one or more dye fixing agents;
- e) optionally from 0.01% to 50% by weight, of one or more cellulose reactive dye fixing agents;
- f) optionally from 0.01% to 15% by weight, of a chlorine scavenger;
- g) optionally 0.005% to 1% by weight, of one or more crystal growth inhibitors;
- h) optionally from 1% to 12% by weight, of one or more liquid carriers;
- i) optionally from 0.001% to 1% by weight, of an enzyme;
- j) optionally from 0.01% to 8% by weight, of a polyolefin emulsion or suspension;
- k) optionally from 0.01% to 0.2% by weight, of a stabilizer;
- l) optionally from 1% to 80% by weight, of a fabric softening active;
- m) from 0.01% by weight, of one or more linear or cyclic polyamines which provide bleach protection; and
- o) the balance carrier and adjunct ingredients;

provided the molecular weight of said fabric abrasion reducing polymer is greater than 100,000 daltons.

8. A pre-soak or rinse-added composition comprising:

- a) from 3% to 4% by weight, of a polyvinylpyrrolidone fabric abrasion reducing polymer having a molecular weight of 160,000 daltons;
- b) from 2% to 3% by weight, of a non-cellulose reactive dye fixative;
- c) from 15% to 20% by weight, 1,4-Bis-(3-aminopropyl)piperazine;
- d) from 0.5 to 1.5% by weight, 2-Phosphonobutane-1,2,4-tricarboxylic acid; and
- e) the balance carriers and adjunct ingredients.

9. A composition according to Claim 8 further comprising a dispersibility aid system, said system comprising:

- i) 0.2% of ethoxylated cocoyl amine having an average of 10 ethoxy units; and
- ii) 0.1% of ethoxylated cocoyl alcohol having an average of 10 ethoxy units.

10. A method for providing fabric with decreased abrasion damage comprising the step of contacting a fabric with a composition comprising:
  - a) from 0.01% by weight, of a fabric abrasion reducing polymer, said fabric abrasion polymer comprising:
    - i) at least one monomeric unit comprising an amide moiety;
    - ii) at least one monomeric unit comprising an N-oxide moiety;
    - iii) and mixtures thereof;
  - b) optionally one or more fabric enhancement ingredients; and
  - c) the balance carriers;provided the molecular weight of said fabric abrasion reducing polymer is greater than 100,000 daltons.

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>7322M/JB</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 99/ 24941</b>	International filing date (day/month/year) <b>22/10/1999</b>	(Earliest) Priority Date (day/month/year) <b>02/11/1998</b>
Applicant <b>THE PROCTER &amp; GAMBLE COMPANY et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

contained in the international application in written form.

filed together with the international application in computer readable form.

furnished subsequently to this Authority in written form.

furnished subsequently to this Authority in computer readable form.

the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2.  **Certain claims were found unsearchable** (See Box I).

3.  **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.       

as suggested by the applicant.

because the applicant failed to suggest a figure.

because this figure better characterizes the invention.

       None of the figures.